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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/665,469	09/22/2003	Toshikazu Onishi	60188-660	5515

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EXAMINER

NGUYEN, PHILLIP

ART UNIT PAPER NUMBER

2828

DATE MAILED: 07/25/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/665,469

Applicant(s)

ONISHI, TOSHIKAZU

Examiner

Phillip Nguyen

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-16 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |  |
|--|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)            |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>9/22/03</u> . | 6) <input type="checkbox"/> Other: ____  |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

Claims 1-5, 7-8, and 10-16 are rejected under 35 U.S.C. 102(e) as being anticipated by Gen-Ei et al. ('420).

With respect to claim 1, Gen-Ei discloses in Fig. 3A a semiconductor laser device 40 comprising an active layer 14; a first cladding layer 16 formed on the active layer, the first cladding layer being doped with a first impurity to have high resistivity (col. 7, lines 33-45).

With respect to claim 2, Gen-Ei further discloses a second cladding layer 18 doped with a second impurity to have a resistivity lower than the resistivity of the first cladding layer. It is

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noted that Gen-Ei discloses carbon, zinc and magnesium as dopants for both first and second cladding layers.

With respect to claim 3, it is inherent that both of the cladding layers have the same motilities since they are made of the same material except for the dopants.

With respect to claim 4, Gen-Ei discloses the cladding layers are made of InGaAlP which contains phosphorous wherein the first impurity could be magnesium and the second impurity could be zinc.

With respect to claim 5, Gen-Ei discloses a concentration of the first impurity of the first cladding is  $1 \times 10^{17} \text{ cm}^{-3}$  which is in the claimed range.

With respect to claims 6-8, Gen-Ei discloses a third impurity which is zinc and the concentration is not less than  $1 \times 10^{18}$  (col. 8, lines 11-15).

With respect to claim 10, Gen-Ei also discloses the second cladding layer 18 is formed into a ridge shaped configuration on the first cladding layer (see the Fig. 3A).

Claims 12-16 further recites a method for fabricating a laser device. Since Gen-Ei discloses the product, it is inherent product by process for performing the method as recited in the claims.

***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 9 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gen-Ei et al. ('420) in view of Akagi ('480). Gen-Ei discloses the claimed invention except for the second cladding layer having a lower portion thereof formed into a stripe configuration. Akagi discloses a semiconductor laser in Fig. 1-2 and 16-17 where a cladding layer are formed in two different configurations such as ridge and stripe. For the improvement of the laser, it would have been obvious to the one having ordinary skill in the art at the time the invention was made to provide a cladding layer which is formed in stripe shape as taught by Akagi as applied to Gen-Ei since it is obvious to one skilled in the art to provide the stripe shape configuration in order to change the current path of the laser. Akagi also discloses the second cladding layer 605 containing arsenic from AlGaAs.

***Citation of Pertinent References***

3. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

The patent to Akagi discloses Semiconductor Light Emitting Device and Method for Producing the same, U.S. Patent No. 6351480

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The patent to Gen-Ei et al. discloses Monolithic Multi-Wavelength Semiconductor Laser Light, U.S. Patent No. 6618420

***Communication Information***

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Phillip Nguyen whose telephone number is 571-272-1947. The examiner can normally be reached on 9:00 AM - 6:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, MINSUN HARVEY, can be reached on 571-272-1835. The fax phone number for the organization where this application or proceeding is assigned is **571-273-8300**.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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**MINSUN OH HARVEY  
PRIMARY EXAMINER**